General

Guideline Title

Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update.

Bibliographic Source(s)

Lyman GH, Somerfield MR, Bosserman LD, Perkins CL, Weaver DL, Giuliano AE. Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. J Clin Oncol. 2017 Feb 10;35(5):561-64. [1 reference] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Lyman GH, Temin S, Edge SB, Newman LA, Turner RR, Weaver DL, Benson AB, Bosserman LD, Burstein HJ, Cody H, Hayman J, Perkins CL, Podoloff DA, Giuliano AE. Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. J Clin Oncol. 2014 May 1;32(13):1365-83. [50 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions for the rating of evidence (High, Intermediate, Low, Insufficient); types of recommendations (Evidence based, Formal consensus, Informal consensus, No recommendation); and strength of recommendations (Strong, Moderate, Weak) are provided at the end of the "Major Recommendations" field.

Note: The 2016 recommendations are listed below. These recommendations are consistent with the previous (2014) recommendations. Similar to the 2014 recommendations, the Update Committee advises that axillary lymph node dissection can be avoided in patients with one or two positive sentinel nodes only when conventionally fractionated whole-breast radiation therapy is planned. Clinicians should also consider this recommendation with caution in patients with large primary tumors (>5 cm), those with large or bulky metastatic axillary sentinel lymph nodes, and/or those with gross extranodal extension of the tumor.

Overarching Clinical Question

How should the results of sentinel node biopsy (SNB) be used in clinical practice, and what are the potential benefits and harms associated with SNB?

Clinical Question 1

Can axillary lymph node dissection (ALND) be avoided in patients who have tumor-free (i.e., negative) findings on SNB?

Recommendation 1: Clinicians should not recommend ALND for women with early-stage breast cancer who do not have nodal metastases (Type: evidence based; benefits outweigh harms; Evidence quality: high; Strength of recommendation: strong).

Clinical Question 2

Is ALND necessary for all patients with metastatic findings on SNB?

Clinical Question 2.1

For women with metastatic sentinel lymph nodes planning to undergo breast-conserving surgery with whole-breast radiotherapy?

Recommendation 2.1: Clinicians should not recommend ALND for women with early-stage breast cancer who have one or two sentinel lymph node metastases will receive breast-conserving surgery with conventionally fractionated whole-breast radiotherapy (Type: evidence based; benefits outweigh harms; Evidence quality: high; Etrength of recommendation: strong).

Clinical Question 2.2

For women with nodal metastases who are planning to undergo mastectomy?

Recommendation 2.2: Clinicians may offer ALND for women with early-stage breast cancer with nodal metastases found in SNB specimens who will receive mastectomy (Type: evidence based; benefits outweigh harms; Evidence quality: low; Strength of recommendation: weak).

Clinical Question 3

What is the role of SNB in special circumstances in clinical practice?

Recommendation 3: Clinicians may offer SNB for women who have operable breast cancer who have the following circumstances:

- *3.1*. Multicentric tumors (Type: evidence based; benefits outweigh harms; Evidence quality: intermediate; Strength of recommendation: moderate)
- *3.2*. Ductal carcinoma in situ when mastectomy is performed (Type: informal consensus; benefits outweigh harms; Evidence quality: insufficient; Strength of recommendation: weak)
- *3.3*. Prior breast and/or axillary surgery (Type: evidence based; benefits outweigh harms; Evidence quality: intermediate; Strength of recommendation: strong)
- *3.4*. Preoperative/neoadjuvant systemic therapy (Type: evidence based; benefits outweigh harms; Evidence quality: intermediate; Strength of recommendation: moderate)

Other Special Circumstances

Recommendation 4

There are insufficient data to change the 2005 recommendation that clinicians should not perform SNB for women who have early-stage breast cancer and are in the following circumstances:

- *4.1*. Large or locally advanced invasive breast cancers (tumor size T3/T4) (Type: informal consensus; Evidence quality: insufficient; Strength of recommendation: weak)
- *4.2*. Inflammatory breast cancer (Type: informal consensus; Evidence quality: insufficient; Strength of recommendation: weak)
- *4.3*. Ductal carcinoma in situ when breast-conserving surgery is planned (Type: informal consensus; Evidence quality: insufficient; Strength of recommendation: strong)
- *4.4*. Pregnancy (Type: informal consensus; Evidence quality: insufficient; Strength of recommendation: weak)

Definitions

Guide for Rating Strength of Evidence

Rating for Strength of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (i.e., balance of

Rating for Strength of Evidence	Definition
	benefits versus harms) and that further research is very unlikely to change either the magnitude or direction of this net effect.
Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

Guide for Types of Recommendations

Type of Recommendation	Definition
Evidence based	There was sufficient evidence from published studies to inform a recommendation to guide clinical practice.
Formal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the Data Supplement (see the "Availability of Companion Documents" field).
Informal Consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. The recommendation is considered the best current guidance for practice, based on informal consensus of the Expert Panel. The Panel agreed that a formal consensus process was not necessary for reasons described in the literature review and discussion. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak").
No recommendation	There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

Guide for Strength of Recommendations

Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on (1) limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Early-stage breast cancer

Guideline Category

Evaluation

Management

Risk Assessment

Clinical Specialty

Oncology

Pathology

Radiation Oncology

Surgery

Intended Users

Advanced Practice Nurses

Patients

Physician Assistants

Physicians

Guideline Objective(s)

- To provide oncologists and other clinicians with current recommendations regarding the use of sentinel node biopsy (SNB) for patients with early-stage breast cancer
- To determine whether previous (2014) recommendations remain valid, based on an updated review of evidence from the medical literature

Target Population

Patients with early-stage breast cancer

Interventions and Practices Considered

1. Sentinel node biopsy (SNB) for operable breast cancer in the following circumstances:
    - Multicentric tumors
    - Ductal carcinoma in situ (DCIS)
    - Prior breast and/or axillary surgery
    - Preoperative/neoadjuvant systemic therapy
2. Axillary lymph node dissection (ALND) for women with early-stage breast cancer with nodal metastases found on SNB who will receive mastectomy

Note: The following interventions were considered but not recommended or there was insufficient evidence to make a recommendation:

ALND for women with early stage breast cancer who

- Do not have nodal metastases

- Have one or two sentinel lymph node metastases who will receive breast-conserving surgery (BCS) with conventionally fractionated whole-breast radiotherapy

SNB for operable breast cancer in the following circumstances:

- Large or locally advanced invasive breast cancers
- Inflammatory breast cancer
- DCIS when breast-conserving surgery is planned
- Pregnancy

Major Outcomes Considered

- Clinical outcomes
  - Recurrence: axillary, locoregional, all; time-to-recurrence; factors related to recurrence (e.g., patient characteristics only in those randomized to no axillary lymph node dissection [ALND])
  - Metastases
  - Mortality: all-cause and breast cancer-specific
  - Number of nodes
  - Complications/morbidity: incidence/rates of lymphedema, etc.
- Performance outcomes: percentage of patients for whom sentinel node biopsy (SNB) is successful

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Guideline Update Process

PubMed and the Cochrane Library were searched for randomized controlled trials, systematic reviews, meta-analyses, and clinical practice guidelines for the period from 2012 through July 2016. The disease and intervention search terms were those used for the 2014 guideline update. An Expert Panel, formed in accordance with the American Society of Clinical Oncology's (ASCO's) Conflict of Interest Management Procedures for Clinical Practice Guidelines, reviewed the identified abstracts for predefined signals that would suggest the need to change a previous recommendation. Additional information about the results of the updated literature search (Data Supplement 2 [see the "Availability of Companion Documents" field]) and 2016 search strategy string and results (Data Supplement 3 [see the "Availability of Companion Documents" field]), as well as a discussion of ASCO's signals approach to guideline updating, are available in the 2016 Data Supplement (see the "Availability of Companion Documents" field) and 2016 Methodology Supplement (see the "Availability of Companion Documents" field), respectively. A QUORUM diagram of the updated search and the clinical questions are provided in Data Supplement 4 and Data Supplement 5, respectively.

Inclusion and Exclusion Criteria

Articles were selected for inclusion in the systematic review of the evidence if they met the following criteria:

- Population: women with early-stage breast cancer.
- For Clinical Questions 1 and 2, fully published or recent meeting presentations of English-language reports of phase III randomized clinical trials (RCTs) or rigorously conducted systematic reviews or meta-analyses. Trials with a population of women with early breast cancer that compared sentinel node biopsy (SNB) with the standard treatment of axillary lymph node dissection (ALND); this included studies comparing SNB alone with SNB plus ALND, for those patients with negative sentinel lymph nodes (SLNs).
- For special circumstances, prospective comparative cohort trials were accepted (criteria listed in Data Supplement 8 in the 2014 version of the guideline [see the "Availability of Companion Documents" field]).

Articles were excluded from the systematic review if they were: (1) meeting abstracts not subsequently published in peer-reviewed journals; (2) editorials, commentaries, letters, news articles, case reports, or narrative reviews; and (3) published in a language other than English.

Number of Source Documents

The search yielded 184 publications. After careful review of the identified publications, eight full-text articles were selected for review by the Expert Panel.

See Data Supplement 4 (see the "Availability of Companion Documents" field) for a Quality of Reporting of Meta-analyses (QUOROM) Diagram showing exclusions and inclusions of publications identified for the systematic review.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Guide for Rating Strength of Evidence

Rating for Strength of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (i.e., balance of benefits versus harms) and that further research is very unlikely to change either the magnitude or direction of this net effect.
Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

Guide for Rating of Potential for Bias

Rating of Potential for Bias	Definitions for Rating Potential for Risk of Bias in Randomized Controlled Trials
Low risk	No major features in the study that risk biased results, and none of the limitations are thought to decrease the validity of the conclusions. The study avoids problems such as failure to apply true randomization, selection of a population unrepresentative of the target patients, high dropout rates, and no intention-to-treat analysis; and key study features are described clearly (including the population, setting, interventions, comparison groups, measurement of outcomes, and reasons for dropouts).
Intermediate	The study is susceptible to some bias, but flaws are not sufficient to invalidate the results. Enough of the items introduce some uncertainty about the validity of the conclusions. The study does not meet all the criteria required for a rating of good quality, but no flaw is likely to cause major bias. The study may be missing information, making it difficult to assess limitations and potential problems.
High risk	There are significant flaws that imply biases of various types that may invalidate the results. Several of the items introduce serious uncertainty about the validity of the conclusions. The study has serious errors in design, analysis, or reporting; large amounts of missing information; or discrepancies in reporting.

Methods Used to Analyze the Evidence

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Data Extraction

Literature search results were reviewed and deemed appropriate for full text review by two American Society of Clinical Oncology (ASCO) staff

members in consultation with the Update Committee Co-Chairs. Data were extracted by two reviewers and subsequently checked for accuracy through an audit of the data by another ASCO staff member. Disagreements were resolved through discussion and consultation with the Co-Chairs if necessary.

Study Quality Assessment

Study quality was formally assessed for the studies identified. Design aspects related to the individual study quality were assessed by one reviewer and included factors such as blinding, allocation concealment, placebo control, intention to treat, funding sources, etc. The risk of bias is assessed as "low," "intermediate," or "high" for most of the identified evidence.

Methods Used to Formulate the Recommendations

Expert Consensus

Informal Consensus

Description of Methods Used to Formulate the Recommendations

Panel Composition

The American Society of Clinical Oncology (ASCO) Clinical Practice Guidelines Committee (CPGC) convened an Update Committee with multidisciplinary representation in medical oncology, surgery, community oncology, patient/advocacy representation, and guideline implementation. The Update Committee was led by two Co-Chairs and two Steering Committee members who had primary responsibility for the development and timely completion of the guideline.

Guideline Development Process

The Steering Committee met once by telephone, and full Update Committee corresponded through e-mail. Progress on guideline development was driven primarily by the Steering Committee along with ASCO staff. All members of the Update Committee participated in the preparation of the draft guideline document.

Development of Recommendations

The guideline recommendations were crafted, in part, using the GuideLines Into DEcision Support (GLIDES) methodology and accompanying BRIDGE-Wiz software™. This method helps guideline panels systematically develop clear, translatable, and implementable recommendations using natural language, based on the evidence and assessment of its quality to increase usability for end users. The process incorporates distilling the actions involved, identifying who will carry them out, to whom, under what circumstances, and clarifying if and how end users can carry out the actions consistently. This process helps the Panel focus the discussion, avoid using unnecessary and/or ambiguous language, and clearly state its intentions.

Rating Scheme for the Strength of the Recommendations

Guide for Types of Recommendations

Type of Recommendation	Definition
Evidence based	There was sufficient evidence from published studies to inform a recommendation to guide clinical practice.
Formal consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the Data Supplement (see the "Availability of Companion Documents" field).
Informal Consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. The recommendation is considered the best current guidance for practice, based on informal consensus of the Expert Panel. The Panel agreed that a formal consensus process was not necessary for reasons described in the literature review and discussion. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate,"

Type of Recommendation	Definition
No recommendation	or "weak"). There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

Guide for Strength of Recommendations

Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on (1) limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The guideline was disseminated for external review and submitted to the *Journal of Clinical Oncology (JCO)* for peer review and publication. All ASCO guidelines are reviewed and approved by the American Society of Clinical Oncology (ASCO) Clinical Practice Guideline Committee prior to publication.

The Clinical Practice Guideline Committee approved this guideline update on October 13, 2016.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use of sentinel node biopsy (SNB) in patients with early-stage breast cancer

Potential Harms

- Adverse events associated with sentinel node biopsy (SNB) and axillary lymph node dissection (ALND) include lymphedema, infections, seroma, and neurologic and sensory deficits, including paresthesia and shoulder pain and/or impairment of motion.
- False-negative results

Qualifying Statements

Qualifying Statements

- The Clinical Practice Guidelines and other guidance published herein are provided by the American Society of Clinical Oncology (ASCO) to assist providers in clinical decision making. The information herein should not be relied on as being complete or accurate, nor should it be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. With the rapid development of scientific knowledge, new evidence may emerge between the time information is developed and when it is published or read. The information is not continually updated and may not reflect the most recent evidence. The information addresses only the topics specifically identified therein and is not applicable to other interventions, diseases, or stages of diseases. This information does not mandate any particular course of medical care. Furthermore, the information is not intended to substitute for the independent professional judgment of the treating provider, because the information does not account for individual variation among patients. Recommendations reflect high, moderate, or low confidence that the recommendation reflects the net effect of a given course of action. The use of words like must, must not, should, and should not indicates that a course of action is recommended or not recommended for either most or many patients, but there is latitude for the treating physician to select other courses of action in individual cases. In all cases, the selected course of action should be considered by the treating provider in the context of treating the individual patient. Use of the information is voluntary. ASCO provides this information on an as-is basis and makes no warranty, express or implied, regarding the information. ASCO specifically disclaims any warranties of merchantability or fitness for a particular use or purpose. ASCO assumes no responsibility for any injury or damage to persons or property arising out of or related to any use of this information or for any errors or omissions.
- Clinicians may perform sentinel node biopsy (SNB) for ductal carcinoma in situ (DCIS) diagnosed by minimally invasive breast biopsy: one, when mastectomy is planned, because this precludes subsequent SNB at a second operation; two, when physical examination or imaging shows a mass lesion highly suggestive of invasive cancer; or three, the area of DCIS by imaging is large (≥5 cm). SNB may be offered before or after neoadjuvant systemic therapy (NACT), but the procedure seems less accurate after NACT.

Implementation of the Guideline

Description of Implementation Strategy

American Society of Clinical Oncology (ASCO) guidelines are developed to be implemented in a variety of health settings. Barriers to implementation and application of the guideline recommendations include the need to increase awareness among front-line practitioners and cancer survivors and also the need to provide adequate services in the face of limited resources. The guideline Bottom Line was designed to facilitate implementation of recommendations. This guideline will be distributed widely through the ASCO Practice Guideline Implementation Network and other ASCO communications. ASCO guidelines are posted on the ASCO Web site and most often published in *Journal of Clinical Oncology (JCO)* and *Journal of Oncology Practice*.

Given the multidisciplinary care discussed in this guideline and the importance of sharing the update with the many relevant stakeholders, it is suggested that community oncologists, surgical oncologists, and radiation oncologists as well as patient navigators and academic, community, and hospital-based cancer centers consider these guidelines. In addition, given that the majority of US cancer programs have cancer tumor boards or continuing medical education activities that include the many clinicians treating breast cancer, the Panel encourages those programs to distribute and stimulate discussion of this guideline update. In expanding outreach of ASCO guidelines through the national tumor board system, the Panel hopes to speed the sharing of this update as well as to stimulate coordinated multidisciplinary care decisions among medical oncologists, radiation

oncologists, and surgical oncologists as well as patients, their advocates, and cancer program leaders. The American College of Surgeons, which accredits most U.S. cancer programs, has included review of National Comprehensive Cancer Network guidelines for the diagnosis and treatment of cancer as quality measures in the past few years. Discussion of including ASCO guidelines and updates as part of this process would further increase the review and discussion of ASCO guidelines and likely speed the uptake of newly evaluated studies and guideline updates that can improve the quality of cancer care for patients.

For additional information on the ASCO implementation strategy, please see the ASCO Web site .

Implementation Tools

Patient Resources

Quick Reference Guides/Physician Guides

Slide Presentation

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Lyman GH, Somerfield MR, Bosserman LD, Perkins CL, Weaver DL, Giuliano AE. Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. J Clin Oncol. 2017 Feb 10;35(5):561-64. [1 reference] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2017 Feb 10

Guideline Developer(s)

American Society of Clinical Oncology - Medical Specialty Society

Source(s) of Funding

American Society of Clinical Oncology

Guideline Committee

Sentinel Lymph Node Biopsy for Patients with Early-Stage Breast Cancer Clinical Practice Guideline Update 2016 Expert Panel

Composition of Group That Authored the Guideline

Update Panel Members: Armando E. Giuliano, MD (*Co-chair*), Cedars-Sinai Medical Center, Los Angeles, CA; Gary H. Lyman, MD, MPH (*Co-chair*), Fred Hutchinson Cancer Research Center and University of Washington, Seattle, WA; Linda D. Bosserman, MD, City of Hope, Duarte, CA; Cheryl L. Perkins, MD (*patient representative*), Dallas, TX; Donald L. Weaver, MD, University of Vermont College of Medicine and Cancer Center, Burlington, VT; Mark R. Somerfield, PhD, American Society of Clinical Oncology (ASCO) Staff

Financial Disclosures/Conflicts of Interest

Guideline and Conflicts of Interest

The Expert Panel was assembled in accordance with the American Society of Clinical Oncology's (ASCO's) Conflict of Interest Policy Implementation for Clinical Practice Guidelines ("Policy," found at http://www.asco.org/rwc). All members of the Expert Panel completed ASCO's disclosure form, which requires disclosure of financial and other interests, including relationships with commercial entities that are reasonably likely to experience direct regulatory or commercial impact as a result of promulgation of the guideline. Categories for disclosure include employment; leadership; stock or other ownership; honoraria; consulting or advisory role; speakers' bureau; research funding; patents, royalties, other intellectual property; expert testimony; travel, accommodations, expenses; and other relationships. In accordance with the Policy, the majority of the members of the Expert Panel did not disclose any relationships constituting a conflict under the Policy.

Authors' Disclosures and Potential Conflicts of Interest

The following represents disclosure information provided by authors of the guideline. All relationships are considered compensated. Relationships are self-held unless noted. I = Immediate Family Member, Inst = My Institution. Relationships may not relate to the subject matter of this manuscript. For more information about ASCO's conflict of interest policy, please refer to www.asco.org/rwc or jco.ascopubs.org/site/ifc .

Gary H. Lyman
Consulting or Advisory Role: Halozyme, G1 Therapeutics
Research Funding: Amgen (Inst)

Mark R. Somerfield
No relationship to disclose

Linda D. Bosserman
Employment: City of Hope Medical Foundation, Front Line Medical Communications
Leadership: Anthem Blue Cross Wellpoint
Honoraria: Pfizer, Association of Managed Care Pharmacy, American Society of Breast Surgeons, Association of Nurse Navigators, Medscape, Physicians Education Resource, Merck & Co
Consulting or Advisory Role: Pfizer, Association of Community Cancer Centers, Novartis, Sandoz-Novartis, Merck & Co

Cheryl L. Perkins
No relationship to disclose

Donald L. Weaver
Patents, Royalties, Other Intellectual Property: I receive a royalty payment from UpToDate as an author for topic cards (electronic chapters) related to sentinel node biopsy in breast cancer

Armando E. Giuliano
No relationship to disclose

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Lyman GH, Temin S, Edge SB, Newman LA, Turner RR, Weaver DL, Benson AB, Bosserman LD, Burstein HJ, Cody H, Hayman J, Perkins CL, Podoloff DA, Giuliano AE. Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. J Clin Oncol. 2014 May 1;32(13):1365-83. [50 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the Journal of Clinical Oncology Web site.

Availability of Companion Documents

The following are available:

- Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update 2016. Methodology supplement. Alexandria (VA): American Society of Clinical Oncology; 2016. 18 p. Available from the Journal of Clinical Oncology Web site.
- Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update 2016. Data supplement. Alexandria (VA): American Society of Clinical Oncology; 2016. 6 p. Available from the Journal of Clinical Oncology Web site.
- Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. Slide set. Alexandria (VA): American Society of Clinical Oncology; 2016. 11 p. Available in PDF and PowerPoint from the American Society of Clinical Oncology (ASCO) Web site.
- Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. Summary of recommendations table. Alexandria (VA): Society of Gynecologic Oncology and American Society of Clinical Oncology; 2016. 2 p. Available from the ASCO Web site.
- Lyman GH, Somerfield MR. Sentinel lymph node biopsy for patients with early-stage breast cancer: 2016 American Society of Clinical Oncology clinical practice guideline update summary. J Oncol Pract. 2017 Mar; 13(3):196-8. Available from the Journal of Oncology Practice Web site.
- Lyman GH, Temin S, Edge SB, Newman LA, Turner RR, Weaver DL, Benson AB, Bosserman LD, Burstein HJ, Cody H, Hayman J, Perkins CL, Podoloff DA, Giuliano AE. Sentinel lymph node biopsy for patients with early-stage breast cancer: American Society of Clinical Oncology clinical practice guideline update. J Clin Oncol. 2014 May 1;32(13):1365-83. Available from the Journal of Clinical Oncology Web site.

Patient Resources

Patient information for sentinel lymph node biopsy for early-stage breast cancer is available from the Cancer.Net Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or

publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI on November 18, 2005. The information was verified by the guideline developer on December 1, 2005. This summary was updated by ECRI Institute on June 9, 2014. This summary was updated by ECRI Institute on April 26, 2017.

Copyright Statement

Disclaimer

NGC Disclaimer